

Pediatric Resources for Disaster Response
In Seattle-King County Hospitals

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Abstract

Introduction: Seattle-King County, Washington is at risk for disasters such as earthquakes, volcanic eruptions, wind-induced power outages, terrorist attacks and pandemics. Of the 1.8 million county residents, more than 400,000 are children. The county's expanse of 2134 square miles with numerous water crossings by major transportation routes suggests need for ample pediatric medical response capabilities in each of 3 sub-county emergency response zones. To date, total quantities and distribution of crucial hospital resources available in King County to manage pediatric victims of a medical disaster are unknown.

Hypothesis: Hospital pediatric resources do not match pediatric population distribution in King County.

Methods: Surveys were electronically delivered to the 8 acute care hospitals in King County that admit pediatric patients. Quantities and categories of pediatric resources, including inpatient treatment space, staff and equipment, were queried. Subsequently, MAK performed on-site data verification at responding hospitals.

Results: 6 of 8 hospitals (75%) completed surveys and site visits; one additional hospital provided partial information by phone. Within responding hospitals, the following pediatric-specific hospital resources were identified: 477 formal bedspaces (PICU, NICU, general wards, and ED), 520 total bedspaces (including pediatric ORs and PACU), 1216 pediatric nurses, 549 pediatric physicians and 578 pediatric-only or pediatric-adaptable ventilators. Zone 3, with 46.7% of the King County pediatric

population, has 8.5% of bedspaces, 4.5% of nurses, and 0.9% of physicians. Another zone, with 22.8% of the pediatric population, has 82.1% of bedspaces, 83.5% of nurses, and 96.9% of physicians.

Conclusions: The majority of hospital pediatric resources are located in the emergency response zone least populated by children and potentially inaccessible in the event of regional disaster. Future planning for pediatric hospital care in the event of a medical disaster in King County should address this vulnerability.